

RURAL DISTRICT COUNCIL

OF

DARTFORD.

ELEVENTH

ANNUAL REPORT

FOR

❖ 1909, ❖

BY

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Medical Officer of Health.

RURAL DISTRICT OF DARTFORD, 1909.

Area of District, 38,891 acres.

Parishes, 17.

Rateable value, £220,110.	{	Buildings	£193,786.
		Land	£26,324.

Assessable value, £208,466.

Population,—Census 1901, 37,532. Estimated for 1909, 42,111.

Number of inhabited houses,—Census 1901, 6,609.

„ „ families, 6,886.

Average number of persons per house, 5.

Density of population, .9 persons per acre.

Crude death rate, 9.9 per 1,000.

Corrected death rate, 8.7 per 1,000.

Birth rate, 22.6 per 1,000.

Infantile Mortality, 68 per 1000. The average for ten previous years being, 129.

Death rate from Zymotic diseases, 0.7 per 1,000.

„ „ for Scarlet Fever, 0.09. Diphtheria, 0.14.

„ „ „ Enteric Fever, 0.04. Phthisis, 0.76.

„ „ „ Cancer, 0.7. Diseases of Respiration, 1.04.

RURAL DISTRICT COUNCIL OF DARTFORD.

Eleventh Annual Report of the Medical Officer of Health for the year 1909.

THE RURAL DISTRICT OF DARTFORD comprises 17 parishes, viz. (Ash, Fawkham, Hartley, Kingsdown, Longfield, Ridley, Southfleet)—(Crayford, Wilmington, Darenth)—(Stone, Swanscombe)—(Sutton-at-Hone, Eynsford, Farningham, Horton Kirby, and Lullingstone), which, with the Urban Districts of Dartford, Erith and Bexley constitute the Dartford Union.

Population.—The total population of the Union at the time of the Census in 1901 was 96,051, viz.: Dartford, 18,644 ; Erith, 25,296 ; Bexley Heath with East Wickham, 14,579 ; and the Rural District, 37,532 (now 42,111).

Characteristics of the District.—Like the rest of Kent the Rural District is hilly, with shallow valleys intersecting one another mostly running north and south, of which the chief is the Darenth Valley, through which runs the river Darent in its course to the Thames, whilst the Cray unites with the Darent below Dartford. Flowing in the same direction through the chalk, there is also a considerable underground stream of water, from which the Kent Water Company, now the London Water Board, derives its supplies by means of numerous wells and pumping stations, several of which are within the Rural District. Fruit and vegetables are the main agricultural industries. A few years back Swanscombe and Southfleet had numerous Hop Fields, but only a few are now left in Southfleet, all those in Swanscombe having been ploughed up, as well as many in Southfleet.

Area.—The area of the Rural District is 38,890 acres, and the estimated population is now (1909) 42,111. Its outline forms an irregular square of about ten miles in each direction, and the Thames bounds it towards the north.

It is divided into three registration districts : The *largest*, the Farningham District, about 3,000 acres in extent, is entirely rural, and has a population of about 18,000 with 3,000 houses. The *smallest*, the parish of Crayford, has 2,455 acres, with a population of about 7,000, and

about 1,300 houses, consisting of the old town of Crayford on the River Cray, and another portion immediately adjoining Erith, the North End or Slades Green, a populous district, which has sprung up in recent years. The *third*, Stone and Swanscombe, about 5,000 acres, has a population of over 12,000, with some 2,200 houses. These two parishes skirt the River Thames, and are the centre of some of the largest cement works in Kent.

Administration.—Eleven years ago I was appointed Medical Officer of Health for the whole District.

At that time the District was divided into four sub-districts :—No. 1, Longfield; No. 2, Crayford; No. 3, Stone and Swanscombe; No. 4, Sutton-at-Hone.

In 1900 Crayford was sewered, and Sutton-at-Hone and Crockenhill in 1908-9.

No. 1, Longfield, the largest, is entirely rural, including the parishes of Ash, Fawkham, Hartley, Kingsdown, Longfield, Ridley, and Southfleet, comprising 17,590 acres, with the small population of 3,466. In 1907 these parishes elected to discontinue scavenging and cesspool emptying under the Council, and to let each householder arrange for this work at his own expense; the old vans and tackle being left for the public use in charge of a conjoint committee. This plan has answered well and we have had no complaints.

No. 2, Crayford, has an acreage of 6,500, and a population of nearly 12,000, is sewered, and all outlying cesspools, together with the scavenging, are attended to by Sanitary vans and carts, the expense being defrayed out of the rates, whilst Wilmington and Darenth are worked by contract.

No. 3, Stone and Swanscombe together have an acreage of 5,150, and have a population of 12,100. For the past two years the cesspool emptying and scavenging have been carried on by the Council without any contract; stables have been erected and they have their own men and horses.

No. 4, Sutton-at-Hone sub-division, including the parishes of Sutton, Horton Kirby, Farningham and Eynsford with Lullingstone, has an acreage of 14,000, with a population of 11,700.

The sewerage of Sutton and Crockenhill is now complete, and most of the bye roads have also been connected, which should contribute largely to the already very healthy record of this group of parishes. Few can show better health statistics, the death rates being for Sutton 10·8; Eynsford, 5·9; and Horton Kirby, 8·3; with equally low figures for Infectious Diseases.

I must not omit to note also the very low death rates for the large parishes of Stone, Swanscombe and Crayford, viz.:—Stone, 9·3; Swanscombe, 7·5; and Crayford, 9·5; with only 5·4 for Wilmington.

I think these low death rates are the outcome of the work done during past years in improving the Sanitary condition of the whole District, and afford the opportunity of recalling my remarks, given in last year's report.

In the year 1898, owing to the wide prevalence of Diphtheria throughout the Rural District, the Local Government Board urged the appointment of one Medical Officer instead of four, as had hitherto been the case, for the more efficient control of the Sanitary conditions, and I was the selected candidate.

Eleven years having elapsed since my appointment, I now again venture to give a summary of that report and the conclusions that may be drawn from it, as the figures there given are fully confirmed by another year's work.

The widespread insanitary conditions existing in 1900 are fully detailed in Dr. Sweeting's Report, but Dr. Darra Mair, on his recent visit of inspection in 1907, was able to make a very different statement, and he says "there can be no doubt that the Sanitary condition of the district has been much improved."

These improved Sanitary conditions are fully borne out and confirmed by the following table, which shows not only that the death rates have progressively fallen from 14·3 to 8·7, a rate which is so low that it is hardly possible to expect it to be further reduced for so large a district, but also that the number of cases of Infectious Disease (especially as regards Diphtheria), has been greatly lessened, and this is well shown by taking the two periods of six years, 1897 to 1902, and 1903 to 1908, and comparing the average number of notifications and deaths during each period. In the first period, the average numbers are 156 notifications and 25 deaths, whilst in the latter they fell to 42 and 8. The same is the case for Enteric Fever and Erysipelas. All these diseases are specially related to foul surroundings and insanitary conditions.

Such a continuous and steady fall in the death rate from year to year, together with the large diminution in the number of notifications, as well as in the mortality from these Infectious Diseases, clearly proves that the decrease is not accidental, and may fairly be ascribed to improved Sanitation; hence with a death rate reduced to 8·7 I may claim for my Inspectors and myself that our work, as shown by actual results, has been well and successfully performed.

This large reduction in the number of Infectious cases also implies a corresponding diminution in the numbers treated in Hospital, the proportion being 65 to 28 per annum, consequently there must be a considerable pecuniary saving to the ratepayers, by lessened Hospital expenditure.

POPULATION.			Number of Infectious Cases Notified.	DIPHTHERIA.			ENTERIC FEVER.			ERYSIPLEAS.		
		Death Rates.		Cases.	Deaths.	Rates.	Cases.	Deaths.	Rates.	Cases.	Deaths.	
1891	30190	—	—	—	—	—	—	—	—	—	—	
1892	33368	—	434	51	2	—	26	2	—	108	4	
1893	34015	—	434	43	14	0·4	14	2	—	99	4	
1894	34662	—	234	78	9	0·26	20	4	—	67	3	
1895	35309	—	328	212	35	0·97	17	3	—	75	3	
1896	35956	—	532	212	35	0·97	17	3	—	75	3	
First Six Years.	1897	36603	14·5	571	154	22	0·6	14	5	0·14	62	2
	1898	37250	15·1	342	159	38	1·2	32	6	0·16	70	2
	1899	37897	14·3	389	166	29	0·76	56	9	0·25	59	1
	1900	38544	13·2	387	128	21	0·52	45	8	0·22	62	5
	1901	39193	14·5	379	178	24	0·61	45	9	0·25	47	3
	1902	38080	13·7	431	107	15	0·39	46	15	0·35	46	2
Last Six Years.	1903	38739	10·2	203	53	8	0·2	32	6	0·15	47	0
	1904	39305	11·3	218	36	5	0·12	41	6	0·15	39	0
	1905	39881	10·1	271	44	10	0·25	35	8	0·2	32	0
	1906	40371	11·8	300	34	5	0·12	14	0	—	36	1
	1907	40984	9·4	413	17	3	0·17	8	0	—	32	2
	1908	41525	9·9	245	41	6	0·14	45	5	0·12	25	0
Averages of Six Years, 1897 to 1902			433	156	25	0·68	40	10	0·16	58	2·5	
Averages of last Six Years, 1903 to 1908			274	42	8	0·15	29	4	0·07	35	0·5	
1909	42111	8·7	215	56	6	0·14	9	1	0·02	30	1·9	

Bye-Laws.—New Bye-laws will shortly be issued, compiled from the model Bye-Laws of the Local Government Board, with special regulations applying to the outlying parishes.

Fruit-Pickers' Huts, Barns, Tents and Caravans.—I can again report that the hut question has given very little trouble, as their sanitary conditions have been closely watched by the Inspectors, but in consequence of the wet summer many of the tent dwellers suffered rather severely from exposure to the damp and rain,

Abatement of Nuisances and Inspection of the District.—The reports of the Inspectors (see end) give a summary of their work. They frequently accompany me on my rounds, making house to house inspections.

During the past year few important sanitary matters have come before the Council. The following are some of the most important :—

The sewerage of Sutton-at-Hone has been completed, and the greater number of possible connections have been made. Arrangements have at last been completed for re-draining Courtney Avenue, and the work will be commenced forthwith. In Crayford we have had subsidence of the sewer in several places, partly from the faulty construction, but also from the sandy nature of the soil. The drainage of Bowron's Tan Yard has been connected with the West Kent Sewer, which will put an end to the pollution of Stanham river.

The nuisance from the cartage of London refuse has been largely abated by the closing of Pinden last May by order of the Court, but it has again been started further up the valley at Longfield siding, which is the property of the Newington Vestry, and being kept remarkably clean is no nuisance, but the S.E. and C. Railway have a line, alongside of which Messrs. Martin are now carting the refuse. So far the stuff has been brought for agricultural purposes and is being deposited in large heaps, which in due time will be ploughed in. These heaps are somewhat offensive when first deposited, but there are only two or three houses immediately adjacent.

Smoke Nuisance.—The smoke nuisance at Swanscombe has been largely abated by the erection of lofty chimneys at White's works, but at Greenhithe it is very great from the new chimneys not being of a sufficient height, consequently the surrounding houses are almost uninhabitable, vegetation is almost destroyed and the health of the inmates is affected.

Unmade Roads.—Several unmade roads in Swanscombe and Stone are in a deplorable condition, these are all short bye-roads and would cost little to make up, but unfortunately it is nobody's business to attend to these matters, unless they can be pronounced injurious to health. The Chase, at Greenhithe, is now being made up, and a road at Longfield will probably be dealt with next, but some others at Swanscombe should be immediately taken in hand, more especially as the cost will be trivial.

Water Supply.—We have very few wells, except in outlying places, where the houses are too few to pay for laying the mains. This applies to Ridley, a very small parish, where there are no wells, and rain-water tanks constitute the only supply, otherwise the district is supplied by the Metropolitan Water Board and the Mid Kent Water Co.

The Milk Supply.—The milk is slightly better than it was a few years back, but we have no control over this all important article of food, which is left to the charge of the police to take samples from to time ; no report is forthcoming, if any is made, consequently the quality varies very considerably between the raids of the Inspector.

This is a matter as to which the County Medical Officer might give special attention. Much of the milk is imported, which is a certain amount of guarantee, as it has probably already been under supervision.

Factory and Workshop Act.—We have no indoor Factories or Workshops where several hands are employed, and all our Factories are under the supervision of the Factory Inspector. The sanitary condition of the existing Factories and Workshops are satisfactory. They are kept under close supervision by the Inspectors, no difficulty being experienced in having defects remedied.

There are several large Paper Mills, also two Steam Laundries, all of which are well provided with the necessary conveniences, and are kept clean and in good order.

There are 44 Bakehouses in the district, of which 5 are underground, and all are certified. They are all in a satisfactory state, well lighted and kept regularly whitewashed.

Home Work.—We have only two Millinery and Dressmaking establishments, where two or more hands are employed, and no Home work is carried on.

Each Inspector keeps a register of all Factories, Workshops, and Workplaces, for his own district.

Summary of the Official Statistical Tables in connection with Factories, Workshops, and Home Work.

1.—Inspections.

Particulars.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (Including Factory Laundries)	33	1	—
Workshops (Including Factory Laundries)	50	7	—
Workplaces	63	—	—
Total ...	146	8	—

2.—Defects Found.

	Number of Defects.			
	Found.	Remedied.	Referred to H.M. Inspector.	Prosecutions. Number of
<i>Nuisances under Public Health Acts—</i>			—	—
Want of Cleanliness	2	2	—	—
Want of Drainage of Floors	1	1	—	—
Other Nuisances	4	4	—	—
Sanitary accommodation unsuitable, not separate for sexes	1	1	—	—
Offences under Factory and Workshop Act	—	—	—	—
Breach of Special Sanitary Requirements for Bakehouses	1	1	—	—
Total ...	9	9	—	—

3.—Home Work. None.

4.—Registered Workshops.							5.—Other Matters.						
Workshops on Register at end of Year.						Number.	Class.						Number.
Laundries ...	...	...	...	...	...	4	Matters notified to H.M. Inspector of					
Bakers ...	...	...	...	...	...	45	Factories ...	...	...	...	...	—
Dressmakers	...	...	...	...	...	8	Action taken in matters under Public Health					
Others ...	...	...	...	...	...	56	Act ...	...	...	...	...	—
							Notified to H.M. Inspector	...	...	...	...	1
							Underground Bakehouses in use at end of						
							year	...	...	...	...	5
Total ...						113	Total ...						6

Population (42111).

During the past year there have been 952 births and 366 deaths, which gives 586 as the natural increase of population from the excess of births over deaths, and brings the number up to 42111.

Last year I estimated the population of the rural district at 41525.

The following is a list of the Public Institutions in the District, and the annexed table gives the average number of Inmates :—

Name of Institution.	Inmates.	Staff (Inside).	Staff (Outside).	Total.
Metropolitan Imbecile Asylum, Darenth ...	1908	220	137	2265
City of London Mental Hospital, Stone ...	287			
" " " " private patients	294	92	71	744
Gore Farm Hospital (Scarlet Fever) ...	537	235	26	798
Parkwood Convalescent Home, Horton Kirby, near Swanley ...	91	29	15	135
Kettlewell, St. Bartholomew's Convalescent Hospital, Swanley Junction ...	58	18	4	80
Little Boys' Home, Hextable ...	168	18	9	195
" " South Darenth ...	300	40	12	352
White Oak Schools Ophthalmic Hospital, Swanley Junction ...	300	64	24	388
St. Mary's Home, Stone ...	53	14	3	70
"Arethusa" Training Ship for Boys (off Greenhithe) ...	230	2	18	250
"Warspite," Marine Society's Ship for Boys (off Stone)	240	4	11	255
"Worcester" Training College, Mercantile Marine (off Greenhithe) ...	156	40	—	196

The following Table gives the area, etc., of each Parish in Acres, Inhabited Houses, Population, Persons per Acre, Persons per House, Births, Deaths, Families per House, and Death Rates.

SUB-DISTRICTS. 1909.	PARISHES. 1909.	Assessable Value.	Acreage.	Number of Inhabited Houses.			Population.				1901.		Persons per acre	Persons per house.	Deaths.	Births.	No. of Families.	Deaths under 1 year.	Death Rate.
											Males.	Females.							
No. I. LONGFIELD. Mr. Longhurst. Acreage 12,144. Population, 3,874.	Kingsdown	2,135	2813	81	85	99	411	412	506	554	258	248	·17	5·1	9	7	103	—	16·2
	Ash...	2,367	3074	139	139	128	632	619	608	676	318	290	·19	4·7	6	16	133	1	8·9
	Ridley	485	834	15	15	14	65	86	64	72	33	31	·07	4·0	—	3	14	—	—
	Hartley	4,116	1211	62	56	63	251	272	284	314	154	130	·23	4·5	5	6	63	1	15·9
	Fawkham...	1,448	1198	46	53	55	237	232	276	307	130	146	·23	5·0	2	4	55	—	6·5
	Longfield	5,433	605	63	99	128	328	498	617	730	317	300	1·0	4·8	7	18	129	2	9·9
	Southfleet...	5,339	2409	190	202	222	922	968	1111	1221	573	538	·45	5·0	16	32	227	4	13·1
No. II. CRAYFORD. Mr. Miles. Acreage, 6,396. Population, 13,330.	Crayford	30,939	2455	872	1045	1272	4347	5268	6572	7512	3463	3109	2·67	5·0	72	162	1314	7	9·5
	Wilmington	11,695	1718	277	352	402	1388	1722	1932	2204	985	947	1·12	4·0	12	47	433	4	5·4
	Darenth	24,264	2223	146	155	191	700	2801	3493	3614	1697	1796	·41	4·8	12	26	211	2	3·3
No. III. SWANSCOMBE. Mr. Caffyn. Acreage, 5,150. Population, 13,859.	Swanscombe	37,524	2141	720	1194	1329	4541	6577	6975	7851	3758	3217	3·2	5·2	59	187	1375	11	7·5
	Stone	25,560	3009	347	590	852	2550	3781	5131	6008	2629	2502	1·7	6·0	56	165	889	16	9·3
No. IV. SUTTON-AT-HONE. Mr. Tiley. Acreage, 14,306. Population, 11,048.	Sutton-at-Hone	35,015	3625	403	691	879	2063	3847	4650	5277	2289	2361	1·77	5·3	57	156	912	7	10·8
	Horton Kirby	13,145	2841	247	274	314	1541	1551	1884	2041	1104	780	·66	6·0	17	39	305	3	8·3
	Lullingstone	2,138	1557	11	13	15	73	64	97	113	46	51	·06	6·4	1	—	15	—	8·8
	Crockenhill	—	—	—	182	190	820	892	1089	—	571	518	—	—	—	—	—	2	—
	Eynsford	9,603	3544	332	376	404	1700	1841	2004	2187	1037	967	·56	4·5	17	51	427	—	5·9
	Eynsford	—	—	—	194	214	830	949	915	—	466	449	—	—	—	—	—	3	—
	Farningham	6,053	2739	159	165	242	892	879	1328	1430	657	671	·48	5·4	18	36	281	5	12·5
	Totals	217,227	37996	4109	5494	6609	22649	32721	37532	42111	19448	18084	·9	5·0	366	952	6886	68	8·7

Births (952).

There were 952 births (478 males and 474 females), a decrease of only two on 1908. This is the smallest number recorded for the rural district, being nearly 100 below the average of the past ten years, and this decrease amounts to about 10 per cent of all births.

Of these 952 births, 18 were illegitimate, equal to 1·8 per cent.

The following table gives the births for each quarter :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Males	122	107	125	124	478
Females	129	128	102	115	474
Total ...	251	235	227	239	952

Birth Rate (22·6).

The Birth rate for the year 1909 is 22·6, whilst that for England and Wales is 25·6 per 1,000 of the population, and lower than any year on record.

The Birth rate for the Dartford Urban District is 25·8.

The following table gives the Birth and Death rates for the past ten years :—

Year.	Birth Rate per 1000	Death Rate per 1000.
1900	28·3	13·2
1901	27·9	14·5
1902	29·2	13·7
1903	27·2	10·2
1904	25·9	11·5
1905	24·5	10·1
1906	23·8	11·8
1907	24·4	9·4
1908	22·9	9·9
1909	22·6	8·7
Average for 10 years.	25·5	11·3

Deaths (366).

During 1909, 418 persons were registered as dying within the district (208 males, 210 females) and 58 (34 males, 24 females), in Public Institutions outside, viz., the Workhouse and Hospitals.

These figures are less than last year, when the number was 448. Of these deaths 110 occurred amongst persons not belonging to the district, patients in the following institutions, viz. :—Darenth Asylum, 73, Gore Farm Hospital (Scarlet Fever) 8, City of London Asylum 29—110.

These 418 deaths represent the total number registered within the Rural district, but to arrive at the exact or corrected number of deaths, 110 non-residents have to be deducted, whilst 58 residents belonging to the various parishes, who died in the Public Institutions outside the district, have to be added, viz., in Dartford Workhouse Infirmary, 44, Bow arrow Hospital, 9, and Livingstone Cottage Hospital, 5 ; hence, after deducting 110 from 418 and adding 58 we have 366 as the corrected number of deaths.

The deaths for each quarter were as follows :—

Quarter ending.	31st March	30th June	20th Sept.	31st Dec.	Totals.
Whole District	105	87	65	88	345
Public Institutions with- in the District ...	21	20	10	22	73
Total ...	126	107	75	110	418
Public Institutions with- out the District ...	17	15	15	11	58
Total ...					476

Death Rate (8·7).

418 deaths, with a population of 42111, gives a gross death rate of 9·9, but the corrected number of deaths, 366, gives the true death rate, which is 8·7.

The death rate for Dartford Urban District is 10·68, whilst that for England and Wales (rural) is 13·6 per 1000.

The death rates for the following Constitutional and Infectious diseases are : for all Tuberculous Diseases, 1·02 : for Phthisis, 0·76 : Cancer, 0·7 : Scarlet Fever, 0·09 : Diphtheria, 0·14 : Enteric Fever 0·02.

Infant Mortality.

	1909	1908	1907	1906	1905
The deaths of infants under 1 year were	68	93	96	133	96
„ persons between 1 year and 60 were ...	131	211	150	187	177
„ „ 60 years and upwards were	167	109	141	153	131
Totals ...	366	413	387	473	404

The rate of mortality of infants under 1 year was again remarkably low, viz.: 71·4 per 1000 births, the average rate for the past ten years being 114, whilst that for the rural districts of England and Wales was 98.

The infant death rate per 1000 deaths equals 185, and to the whole population is 1·6 per 1000.

The average number of deaths of infants under 1 year for the past 10 years amounts to 119.

The deaths of infants, under 1 year, for each quarter were :—

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
12	18	21	17

The following table gives the causes and distribution of the 68 deaths of infants under one year :—

Diseases.	Ash.	Crayford.	Darent.	Eynsford.	Farningham.	Hartley	Horton Kirby.	Longfield.	Southfleet.	Stone.	Sutton-at-Hone.	Swanscombe.	Wilmington.	Totals.
Influenza	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Whooping Cough	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Diarrhoea	—	2	—	2	1	—	—	—	1	—	1	1	—	8
Bronchitis	1	1	—	—	1	—	—	1	—	2	—	2	1	9
Pneumonia	—	—	—	—	—	—	—	1	—	—	—	—	1	2
Premature Birth	—	3	1	2	2	1	3	—	2	5	2	4	1	26
All other Diseases	—	1	1	—	1	—	—	—	—	9	3	5	1	21
Totals ..	1	7	2	4	5	1	3	2	4	16	7	12	4	68

PART II (A).

DEATHS FROM CONSTITUTIONAL CAUSES.

Phthisis.—Pulmonary Consumption causes 32 deaths, and other Tubercular Diseases 11, altogether 43 deaths from Tubercular complaint.

The death rate from Phthisis is 0·76 per 1,000 population, and for all Tubercular Diseases 1·02 per 1,000.

The Local Government Board have issued an order for the notification of all pauper cases of Consumption. This notification will be strictly private, and will doubtless prove the stepping stone for the more general notification of all Consumptive cases. This is the first acknowledgment of the duty, incumbent on our governing powers, of dealing with this, the greatest and most fatal scourge from which we all suffer in some degree, and I trust it will be speedily followed by an order for all Councils to make such provision for the isolation of and dealing with the wants of Consumptive patients at all stages of the diseases, as their circumstances may render necessary.

Since writing the above a Conference, convened by Dr. Howarth, the County Medical Officer, has been held at Maidstone, which was attended by nearly all the Medical Officers of the County, to consider the best method of promoting combined action in recommending the erection of a Sanatorium or Sanatoria for the County of Kent, for the treatment of cases of Consumption.

After a lengthened discussion it was unanimously decided that each Medical Officer should approach his Council with the view of obtaining combined action for the promotion of this object, and recommending that a commencement should be made by forming combined areas of several adjacent Sanitary Authorities, and that the County Medical Officer should draw up some scheme for this purpose.

The need of appropriate action was pointed out by the Medical Officer, who among other things alluded to the mortality from Phthisis, which in the County of Kent alone is responsible for nearly 1,000 deaths per annum, whilst the deaths from all the other Infectious Diseases together hardly amount to 800 per annum, and he pointed out that it is not asking too much of our Councils, who already, at a heavy expense, have almost universally established Hospitals for the isolation of Infectious Diseases, to combine in an endeavour to check the frightful mortality from Phthisis and other Tubercular Diseases. These combinations would be more extensive than those combined for dealing with the ordinary zymotics.

Cancer caused 30 deaths (10 males, 20 females), equal to 0·7 per 1,000, about the same as last year and about the average.

Diseases of Respiration.—These diseases, including Bronchitis, Pneumonia and Pleurisy, caused 44 deaths, equal to 1·64 per 1,000, which is much below the average.

Uncertified Deaths.—Two deaths were registered as uncertified.

There were 17 deaths in the district among non-resident strangers, viz., 3 in huts, 3 in tents, 1 in a caravan, 2 from drowning in the Thames, and 7 in Public Institutions.

Inquests.—Coroners' Inquests were held in 36 cases, equal to 9·8 per cent. of all deaths and 0·8 per 1,000 population. Of these Inquests 21 were returned as from Natural causes; 5 were from accidents, and of these 1 was drowning, 1 from alcohol, and 1 infant was suffocated in bed; there were 3 suicides. Three of these were at the Workhouse, and there were three in the Asylum.

Zymotic or Infectious Diseases.—Notifiable.

Small Pox, Scarlet Fever, Diphtheria, Enteric Fever, Erysipelas and Puerperal Fever have all to be notified to the Medical Officer, either by Parent or Doctor.

During 1909 215 cases of Infectious Disease were notified, of which 56 were Diphtheria, 118 Scarlet Fever, 9 Enteric Fever, 30 Erysipelas, and 2 Puerperal Fever; of these 150 were admitted to the Isolation Hospital; there were also 52 others belonging to the Public Institutions.

During 1909 these various Infectious Diseases (excluding Phthisis) caused 31 deaths, against 79 in 1908, and correspond to a death rate of 0·7.

The Zymotic death rate for England and Wales for 1909 is 0·8.

These 215 notifications correspond with the average of the last six years, which when compared with the figures of the ten preceding years show a diminution of about half, and fully bear out the remarks I have already made as to the benefits resulting from the Sanitary improvements effected since 1899.

The cases of Scarlet Fever were again much less numerous than in 1908, whilst of Enteric Fever and Diarrhœa there were very few cases; on the other hand there were numerous scattered cases of Diphtheria.

(1).—**Scarlet Fever.**—118 cases were notified, of which 95 were transferred to Hospital. There were 4 deaths, giving a death rate of 0·09.

Scarlet Fever was very prevalent in London in 1908 and 1909, and our district suffered in the same way, the cases gradually becoming fewer towards Autumn.

Swanscombe was the only parish where there was any number of cases, but they were not sufficiently numerous to be considered an epidemic.

(2).—**Diphtheria and Membranous Croup** were responsible for 56 notifications, against 41 in 1908, and 17 in 1907; of these 40 were removed to Hospital. There were 6 deaths, giving a mortality of 10·7 per cent of all attacked, and a death rate of 0·14 per 1,000 population, the same as for England and Wales, viz., 0·14. There is nothing to comment upon in these cases, as they were distributed fairly equally throughout the district.

There were a few cases connected with the Southfleet School, but the disease never spread; no other outbreak was reported.

I have already referred to the gradual fall in the number of cases of Diphtheria year by year since 1899, also to the corresponding decrease in the death rates; the diminution in these Septic Diseases and in the death rates is so regular and spread over so many years that we may fairly attribute it to the improved Sanitary state of the district, which must be very noticeable to those who knew it some years ago.

Although the reduction in the number of cases may be ascribed to improved Sanitary conditions, the reduction in the number of deaths is largely due to the introduction of Antitoxin, for the mortality from Diphtheria has been so much reduced by the use of Antitoxin, which has proved so successful in the treatment of Diphtheria, that little hesitation is now felt by parents to its immediate use in nearly all cases.

It would be of considerable assistance and undoubted advantage if the County Public Health Department would undertake, for the various District Councils, the bacteriological examination of swabbings, taken from the throats of children suspected of infection from Diphtheria, and also any other bacteriological work associated with the prevention of disease. The distribution of Antitoxin might likewise be regarded as a County responsibility, and included in the duties of that department.

This is a school matter, which is most important and would probably be the means of checking many outbreaks of diphtheria, and thereby saving much expenditure in the treatment of these cases in Hospital.

(3).—**Typhoid or Enteric Fever.**—Only 9 cases were notified, and of these 6 were removed to Hospital. There was one death, which gives the small death rate of 0·02 per 1000 population. The rate for England and Wales is 0·07.

(4).—**Erysipelas.**—30 cases were notified in the district, one death only.

(5).—**Puerperal Fever.**—Two cases occurred, but neither was fatal.

PART II. (C).

Zymotic or Infectious Diseases—(Not Notifiable).

(1).—**Measles**—Not being notifiable, I have no means of knowing how many cases have occurred. No deaths were reported. The district was remarkably free from measles, as well as all other infectious infantile diseases during the whole year.

(2).—**Whooping Cough** occurred in a slight form in three or four parishes, but it never assumed an epidemic form. Three deaths were reported.

(3).—**Diarrhœa** was even less prevalent than in 1908 or 1907, and only caused 12 deaths throughout the year. There is nothing to note except its almost complete absence.

(4).—**Influenza** is gradually abating, at any rate in the severity of the cases. It caused 4 deaths.

The Annual Reports of the Sanitary Inspectors, as well as the Special Forms of Report, Tables I. to V., as supplied by the Local Government Board, are appended.

I have the honour to be,

Yours faithfully,

SYLVESTER RICHMOND, M.D.,

Medical Officer of Health.

INSPECTOR'S REPORT.

For the Year ended 31st December, 1909.

	District No. 1.	District No. 2.	District No. 3.	District No. 4.
	Mr. Longhurst.	Mr. Miles.	Mr. Caffyn.	Mr. Tiley.
1. Complaints received and investigated, and nuisances abated	18	Constant.	81	27
2. Inspection made	Constant.	Constant.	Constant.	Constant.
3. Dwelling Houses closed	—	1	—	1
4. Plans passed for new houses	—	4	—	11
5. Plans passed for new additions	—	3	—	16
6. Defective roofs repaired	22	27	2	8
7. Yards paved, repaired and drained	2	16	9	5
8. Animals improperly kept—Removed	7	—	4	6
9. Defective drains repaired	17	13	53	52
10. Fruit-pickers' huts whitewashed	88	150	—	324
11. Water laid on and wells abolished	16	—	—	1
12. Old wells abolished	3	—	2	—
13. Samples of water analysed	—	—	3	—
14. New ash pits or dust tins provided	—	40	19	44
15. Overcrowding abated	—	9	2	5
16. Cesspools abolished and houses connected with sewer	—	2	—	202
17. Cesspools repaired	23	—	20	7
18. New cesspools provided	31	—	10	2
19. Privy pits abolished	18	4	2	40
20. Privies emptied	Not obtainable	80	167	257
21. Cesspools emptied	„ „	800	2469	1303
22. Loads of sewage removed	„ „	3176	7721	5532
23. Loads of ashes and refuse removed	„ „	1742	2091	Not obtainable
24. Infectious cases removed to Hospital	22	52	51	39
25. Houses disinfected after infectious disease	29	63	56	42
26. Schools disinfected after infectious disease	2	8	1	2
27. Sanitary defects in Schools repaired	2	3	—	2
28. No. of Cowsheds, Milk-sellers, &c., registered	11	6	14	12
29. No. of Bakehouses registered	4	7	15	18
30. No. of Slaughter-houses in use	4	2	5	9

TABLE I.
Vital Statistics of Whole District during 1909 and previous years.

YEAR.	Population estimated to middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.			
		Number.	Rate.*	Under 1 Year of Age.		At all Ages.					Number.	Rate.*	Number.	Rate.*
				Number	Rate per 1000 Births registered.	Number.	Rate.*							
1899	37897	1085	28·6	169	155	582	15·3	185	112	73	543	14·3		
1900	38544	1091	28·3	146	130	532	13·8	199	111	88	509	13·2		
1901	39193	1096	27·9	191	173	641	16·3	213	141	72	572	14·5		
1902	38080	1115	29·2	132	118	692	18·1	348	247	81	523	13·7		
1903	38739	1058	27·2	107	101	473	12·1	188	131	57	399	10·2		
1904	39305	1021	25·9	128	125	527	13·4	184	128	56	455	11·5		
1905	39881	980	24·5	96	97	498	12·4	224	159	65	404	10·1		
1906	40371	963	23·8	133	138	541	13·3	184	125	59	475	11·7		
1907	40984	1000	24·4	96	96	437	10·6	162	106	56	387	9·4		
1908	41525	954	22·9	93	97·5	448	10·7	151	93	58	413	9·9		
Averages for years 1899-1908.	39452	1036	26·3	129	123	537	13·6	204	135	66	468	11·8		
1909	42111	952	22·6	68	71	418	9·9	168	110	58	366	8·7		

* Rates in Columns 4 and 8 should be calculated per 1,000 of the estimated gross population.

Area of District in acres
(exclusive of area
covered by water.)

38891.

Total population at all ages ... 39193

Number of inhabited houses ... 6937

Average number of persons per house ... 5·4

} Census
of 1901.

I. Institutions within the District receiving Sick and Infirm persons from outside the District.	II. Institutions outside the District receiving Sick and Infirm persons from the District.
<ol style="list-style-type: none"> 1. City of London Mental Hospital, Stone 2. Metropolitan Asylum, Darenth 3. Gore Farm Hospital (Scarlet Fever) Darenth 4. St. Bartholomew's Hospital, Kettlewell Homes, Swanley Junction 5. White Oak Schools, Eye Hospital, Swanley Junction 6. Parkwood Hospital Convalescent Home, Horton Kirby, Swanley Junction. 	<ol style="list-style-type: none"> 1. Workhouse Infirmary, Dartford. 2. Bow Arrow Isolation Hospital, Dartford. 3. Livingstone Cottage Hospital, Dartford. 4. Small-pox Hospital, Joyce Green, Dartford.

TABLE II.

Vital Statistics of separate Localities in 1909, and previous years.

NAMES OF LOCALI- TIES.	Whole District.				Ash.				Crayford.				Darent.				Eynsford.				Farningham.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1899	37897	1085	543	169	610	20	11	3	6310	219	109	33	3354	22	16	6	1971	65	29	11	1239	26	10	4
1900	38544	1091	509	146	608	15	7	1	6440	253	96	27	3428	33	13	2	1986	63	41	6	1284	29	11	1
1901	39193	1096	572	191	608	15	6	2	6572	190	118	35	3493	23	14	4	2004	63	27	8	1328	36	23	7
1902	38080	1048	523	132	617	15	6	1	6679	209	102	24	3506	34	21	3	2009	44	39	9	1345	32	15	1
1903	38739	1058	399	107	622	13	8	2	6801	197	75	19	3512	16	10	2	2040	64	33	9	1358	25	12	2
1904	39395	1021	455	128	632	15	5	1	6930	212	83	23	3536	35	11	1	2072	59	27	8	1379	40	19	6
1905	39881	980	404	96	644	25	13	6	7047	195	78	6	3551	28	13	4	2095	49	26	6	1394	31	16	3
1906	40371	965	475	133	653	15	6	1	7153	192	86	24	3563	26	14	5	2113	46	28	6	1397	28	25	6
1907	40984	1000	387	96	665	18	6	2	7302	209	60	21	3580	28	11	1	2136	47	24	6	1406	31	22	2
1908	41525	954	412	93	667	11	9	3	7422	200	80	14	3600	29	9	2	2155	47	28	10	1413	23	16	5
Averages Of Years 1899 to 1908.	39461	1029	468	129	622	16	7	2	6865	207	88	23	3512	27	13	3	2058	48	27	7	1330	29	17	4
1909	42111	952	366	68	676	16	6	1	7512	162	72	7	3614	26	12	2	2189	51	17	4	1431	36	18	5

TABLE II.

Vital Statistics of separate Localities in 1909, and previous years.

NAMES OF LOCALITIES.	Fawkham.				Hartley.				Horton.				Kingsdown.				Longfield.				Lullingstone.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1899	268	4	4	2	283	6	7	1	1815	40	14	2	488	11	4	1	594	26	8	3	91	3	—	—
1900	272	4	1	—	283	17	7	1	1848	24	15	2	497	15	10	1	606	18	11	4	94	3	1	—
1901	276	5	2	1	284	12	8	5	1884	40	22	2	507	8	5	2	617	28	16	7	97	4	1	—
1902	282	8	2	—	287	6	3	1	1894	34	24	3	518	13	1	1	631	25	11	1	99	2	—	—
1903	290	9	1	1	289	7	5	1	1923	45	16	3	531	17	4	—	649	33	15	5	102	5	2	1
1904	293	5	2	—	296	10	3	1	1945	47	25	10	536	12	7	2	663	24	8	5	106	4	—	—
1905	296	5	2	—	303	8	1	—	1963	44	26	5	540	10	6	3	680	29	14	6	108	2	—	—
1906	303	10	3	—	305	8	6	1	1973	34	24	4	551	12	1	—	695	26	11	7	109	3	2	1
1907	304	5	1	1	307	6	4	—	2007	51	17	5	554	9	6	—	708	22	9	1	112	4	1	—
1908	305	5	4	1	313	8	2	1	2019	39	27	5	556	9	7	1	719	20	9	2	114	2	—	—
Averages of years 1909 to 1908	289	6	2	1	291	9	5	1	1927	40	21	4	528	11	5	1	656	25	11	4	103	3	1	—
1909	307	4	2	—	314	6	5	1	2041	39	17	3	554	7	9	—	730	18	7	2	113	—	1	—

TABLE II.

Vital Statistics of separate Localities in 1909, and previous years.

NAMES OF LOCALI- TIES.	Ridley.				Southfleet.				Stone.				Sutton-at-Hone.				Swanscombe.				Wilmington.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1899	64	2	2	1	1082	33	12	4	4861	163	80	26	4489	131	69	24	6897	214	74	26	1890	55	38	12
1900	62	4	—	—	1096	32	12	2	4996	157	80	30	4569	117	74	31	6936	117	77	27	1911	56	50	10
1901	64	2	—	—	1111	25	16	6	5131	166	69	18	4650	165	75	25	6975	206	106	37	1932	61	38	10
1902	64	3	3	—	1128	27	10	2	5242	183	73	20	4719	137	68	23	7090	204	89	23	1971	72	33	10
1903	66	2	—	—	1135	23	16	3	5378	174	37	14	4804	135	50	9	7222	224	92	26	2017	69	23	10
1904	66	2	2	—	1154	29	10	4	5487	160	51	21	4870	141	75	42	7301	174	95	20	2037	52	30	9
1905	69	3	—	—	1160	20	14	—	5586	156	57	21	4963	136	43	13	7407	181	75	16	2075	58	20	1
1906	69	1	1	—	1160	18	18	6	5692	165	59	22	5029	135	74	20	7495	178	90	24	2114	66	27	5
1907	69	—	—	—	1183	34	11	3	5793	150	49	13	5104	130	65	12	7620	198	73	23	2137	48	25	6
1908	69	3	3	—	1205	33	9	4	5899	150	44	15	5178	132	58	9	7723	184	81	14	2169	59	27	7
Averages of Years 1899 to 1908	66	2	1	—	1141	27	13	3	5406	162	60	20	4837	137	65	21	7266	186	83	24	2025	59	31	8
1909	72	3	—	—	1221	32	16	4	6008	165	56	16	5277	156	57	7	7851	187	59	11	2204	47	12	4

TABLE IV.

Causes of, and Ages at Death, during the Year, 1909.

CAUSES OF DEATH.	Deaths in or belonging to the whole District at subjoined ages.						Deaths in or belonging to Localities (at all ages.)														Total Deaths whether of 'Residents' or 'non-Residents' in Public Institutions in the District.							
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Ash.	Crayford.	Darent.	Eynsford.	Farningham.	Fawkham.	Hartley.	Horton Kirby.	Kingsdown.	Longfield.	Lullingstone.	Southfleet.	Stone.		Sutton-at-Hone.	Swanscombe.	Wilmington.	City Asylum.	Darent Asylum.	Gore Farm.	
Scarlet fever	4	...	...	2	1	1	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	5	9
Whooping-cough	3	1	2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Diphtheria (including Membranous croup)	6	...	3	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	1	...	4
Fever:—Enteric	1	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Epidemic influenza	4	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...
Diarrhoea	12	8	4	...	...	...	...	...	3	...	2	1	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...
Enteritis	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis, (Pulmonary Tuberculosis.)	32	...	1	3	6	19	3	...	7	1	2	3	...	...	...	1	...	1	2	...	4	1	...	...	...	...	...	...
Other tuberculosis diseases	11	...	2	3	1	4	1	...	3	...	1	2	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...
Cancer, Malignant disease	30	...	...	...	...	16	14	1	4	3	...	2	...	...	...	...	...	...	3	4	...	4	...	...	...	...	...	...
Bronchitis	30	9	4	1	...	3	13	1	9	1	1	1	...	...	...	...	...	...	1	...	5	4	...	...	...	...	...	...
Pneumonia	13	2	1	1	...	6	3	...	2	1	1	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...
Pleurisy	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of Respiratory organs	2	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alcoholism	4	...	...	...	...	4	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Venereal diseases	2	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
Premature birth	28	28	...	...	...	...	...	...	2	1	2	2	...	...	1	3	...	...	...	2	7	3	...	...	...	...	...	...
Diseases and accidents of parturition	2	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Heart diseases	50	2	...	3	...	22	23	...	6	1	...	2	...	...	2	2	2	2	...	7	16	...	...	...	...	...	...	...
Accidents	8	1	1	1	...	4	1	1	1	...	...	1	...	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...
Suicides	5	...	...	...	3	...	2	...	2	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
All other causes	116	14	8	2	2	31	59	3	26	2	6	4	...	2	8	3	1	...	5	19	17	...	2	13	20	1	...	62
All causes	366	68	27	19	13	118	121	6	72	12	17	18	2	5	17	9	7	1	16	56	57	59	12	29	73	8	...	168

TABLE V.
Dartford Rural District.
INFANTILE MORTALITY DURING THE YEAR 1910.

Deaths from stated causes in Weeks and Months under One Year of age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified	18	6	7	3	34	12	4	2	2	2	4	1	—	2	2	1	66
	Uncertified	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
i. Common Infectious Diseases.	Small-pox .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Chicken-pox .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Measles .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Scarlet Fever .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Diphtheria (including Membranous Croup) .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Whooping Cough .. ..	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
ii. Diarrhoeal Diseases.	Diarrhoea, all forms .. ..	.....	.....	.....	1	1	1	1	.....	.....	2	2	.....	.....	1	.....	.....	8
	Enteritis, Muco-enteritis .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Gastro-enteritis .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Gastritis, Gastro-intestinal Catarrh .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
iii. Wasting Diseases.	Premature Birth	15	4	4	2	25	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
	Congenital Defects	2	1	.....	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
	Injury at Birth	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	Want of Breast-milk, Starvation .. ..	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	Atrophy, Debility, Marasmus	1	.....	2	.....	3	2	.....	.....	1	.....	.....	.....	.....	.....	.....	1	7

iv. Tuberculous Diseases	Tuberculous Meningitis .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Tuberculous Peritonitis: .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
	Tabes Mesenterica .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Other Tuberculous Diseases .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
v. Other Causes.	Erysipelas .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Syphilis .. ..	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	Rickets .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Meningitis (<i>not tuberculous</i>) .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Convulsions .. ..	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	2
	Bronchitis .. ..	.....	.....	1	.....	1	3	3	.....	.....	.....	.....	.....	.....	1	1	.....	9
	Laryngitis .. ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Pneumonia .. ..	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2
	Suffocation, overlying .. ..	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
	Other Causes .. ..	.....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	3
		19	6	7	3	35	12	4	2	2	2	4	1	.....	3	2	1	68

District (or sub-division) of Dartford Rural.

Population estimated to middle of 1909, 42111.

Births in the year { legitimate 931.
illegitimate 21.

Deaths in the year of { legitimate infants 63.
illegitimate infants 5.

Deaths from all Causes at all Ages 366.



DARTFORD :
SNOWDEN BROTHERS, "West Kent" Printing Works, High Street.



